

AMENDMENTS TO THE SPECIFICATION

Please DELETE and REPLACE the entire section entitled "BACKGROUND OF THE INVENTION" (which starts on page 1) with the following replacement section (provided with markings to show all changes relative to the previous version):

BACKGROUND OF THE INVENTION

Vending machines are well-known fixtures of modern life and may be broadly described as machines that dispense food, drinks, chewing gum, toys, toiletries, or some other type of merchandise in exchange for money or tokens. A principal advantage of dispensing products via vending machines is that they provide uninterrupted access to the goods contained therein, thereby allowing consumers to make purchases at times convenient for them. The vending machine operator also benefits in that the cost of providing an attendant to collect the money and distribute the goods is reduced to roughly the cost of purchasing or leasing and operating the machine. Sales volumes that would be much too low to justify hiring an attendant to distribute the goods can often be profitable for a vending machine operation.

Of course, unattended operation is both a strength and a weakness of a vending system. It is a weakness to the extent that a conventional vending machine cannot do what a human attendant might: attempt to influence the consumer's buying decision to benefit the owner's objectives. For example, a human salesperson might attempt to increase the profit obtained from a paying customer by suggesting that the customer should consider purchasing a different product than the one originally selected, a product that has a higher profit margin. Similarly, a human can try to direct customers toward a product item that is nearing its expiration date, so that the item might be sold before it must be pulled from the shelves and discarded. In brief, the sales attendant can attempt to dynamically influence the buying decision of a consumer during the sale process to suit the seller's needs.

It is, of course, the nature of a conventional vending machine to respond automatically and unthinkingly to a product selection request from a customer. However, this operating model may be inconsistent with the needs of the vending machine owner / operator, who might have a variety of products with differing profit margins or expiration dates loaded into the same machine. Instead, an operator might wish to emphasize the sale of one product over another for any number of reasons, but primarily in order to maximize his or her profit. Conventional vending machines, though, offer little help in this regard.

The vending machine arts have seen a good deal of innovation in recent years, but no one has yet addressed the problem introduced above, namely, how best to influence the buying decision of a ready, willing, and able buyer who has made an initial product selection. Some inventors have focused on approaches such as static displays aimed at influencing the customer's initial purchase decision before the sales transaction begins. See, e.g., Bachmann et al., "Display Panel for Vending Machines", U.S. Patent 4,551,935, and Hetrick et al., "Automatic Transaction System with a Dynamic Display and Methods of its Operation", U.S. Patent 5,831,862. However, neither of these patents disclose or suggest alternate products to the customer after the initial product selection has been made.

Others are experimenting with vending machines that are in communication with a central computer via a network, thereby letting the company monitor inventory in distant locales and change prices dynamically in response to local demand. Among the contemplated uses for this machine include variable pricing based on the time of day, temperature, and the past demand for a product. However, under this model prices are changed "after the fact" at a point when it is too late to influence the purchase behavior of a currently ready, willing, and able buyer.

Still others have developed "revenue managed vending machines" that dynamically adjust prices according to substantially real-time readings of supply and demand. See, for example, the co-pending application by Tedesco et al., Application Serial No. 08/947798, filed on October 9, 1997, the disclosure of which is incorporated herein by reference. Revenue managed vending machines automatically make pricing decisions based on recent measurements of supply and demand, and their prices can potentially be altered after each purchase. The data received during a given transaction can be used to make the next transaction more profitable.

Other approaches to profit maximization include vending machines that are configured to offer "package deals" and "upsells", where high demand products may be advantageously paired with low demand products in a promotional effort to leverage the popularity of one product against distressed and possibly perishable inventory. These vending machines may additionally offer supplemental products to the buyer of an initial product in an effort to boost sales. However, both of these aspects require the buyer to purchase more than one product in order to obtain a discount; and neither presents an alternate product offer to a ready and willing buyer. Tedesco et al., in Application Serial No. 09/012,163, filed on January 22, 1998, which issued on May 28, 2002, as U.S. Patent No. 6,397,193, teach one such vending approach, the disclosure of which is incorporated herein by reference.

Finally, co-pending U.S. Application 09/164,670, filed October 1, 1998, which issued on November 27, 2001, as U.S. Patent No. 6,324,520, the disclosure of which is incorporated herein by reference, teaches a vending machine that offers products to undecided customers and suggests substitute products when the originally selected item is out of stock. The substitute product can be designated by the operator, based on historical likelihood of acceptance, or based on average selection time. This general approach works to offer a substitute product only when the requested product is unavailable.

In summary no one has yet discovered a method by which the ready-and-willing buyer can be encouraged to take a product different from the one originally selected, with the alternate product being chosen so as to better optimize profitability of the vending machine owner / operator.

Heretofore, as is well known in the vending arts, there has been a need for an invention to address and solve the above-described problems. Accordingly, it should now be recognized, as was recognized by the present inventors, that there exists, and has existed for some time, a very real need for a vending system and apparatus that would address and solve the above-described problems.

Before proceeding to a description of the present invention, however, it should be noted and remembered that the description of the invention which follows, together with the accompanying drawings, should not be construed as limiting the invention to the examples (or preferred embodiments) shown and described. This is so because those skilled in the art to which the invention pertains will be able to devise other forms of this invention within the ambit of the appended claims.